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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,366	05/13/2002	Jan Hans Vestre	00300-912	4545

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EXAMINER

SUKMAN, GABRIEL S

ART UNIT PAPER NUMBER

3641

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/070,366	<b>Applicant(s)</b> VESTRE, JAN HANS	
	<b>Examiner</b> Gabriel S. Sukman	<b>Art Unit</b> 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 13 May 2002.

2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 25-48 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 25-29, 31-33 and 45-48 is/are rejected.

7) ☒ Claim(s) 30 and 34-44 is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 13 May 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All   b) ☐ Some   \* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u>	6) <input type="checkbox"/> Other:

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "35" on page 11, line 24. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 47 is objected to because of the following informalities: the typographical error in the claim, "toward's". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 32 recites the limitation "the drive chamber" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 25-29, 31-33, and 45-48 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,641,938 to Gawlick et al. (hereinafter Gawlick).

Gawlick discloses all of the limitations of claim 25. Disclosed is an electric detonator that has an ignition charge (see col. 1, lines 31-32), a battery unit (ref. no. 7) which is associated with a circuit of controlling the emission of the igniter current, the battery (7) is movable between a resting position and an activated position for igniting the igniter. The battery activating means is pyrotechnically activated (col. 1, lines 24-34, "...providing gas-enriched primer charge for producing a gas pressure which serves to displace a battery so as to establish communication..." ) and the battery unit has the shape of a plunger or piston (as shown in the drawings) in a tubular bore of the detonator as claimed.

Claim 26 is anticipated by Gawlick as well since Gawlick discloses a pyrotechnic ignition tube that is connected to the detonator (delay charge, 4).

Claim 27 is anticipated by Gawlick in light of the drive charge disclosed (primer charge 5), which drives the battery unit.

Claim 28 is anticipated by Gawlick as well since Gawlick discloses, as can be seen in figure 1, that the ignition tube (4) connection is provided at the drive charge (5) since the two devices are in communication with each other.

The limitations of claim 29 are taught by Gawlick since the drive charge is in a drive chamber (housing, 16) to which an actuation part of the battery unit is exposed to be acted upon (upper surface of battery, 7, shown in figure 1).

Claim 31 is clearly anticipated by Gawlick since the drive chamber of Gawlick is tubular.

Claim 32 is clearly anticipated by Gawlick since the walls of the drive chamber must be formed in order to resist the predetermined driving pressure necessary for the detonator to function.

Claim 33 is necessarily anticipated by Gawlick since the space ahead of the battery unit (as shown by comparison of figures 5 and 6) decreases in volume as the battery unit is activated, thereby compressing the gas that was originally in the space.

Claim 45 is anticipated by Gawlick since Gawlick discloses a contact arrangement (includes pole 8 in figures 2 and 4 and contact 20 in figures 5 and 6) in a circuit that emits igniter current from the battery that is open in the initial state (figures 2 or 5) and closed in an activated state (shown in dashed lines in figure 6). The contact is taught to be moved from the rest state to the activated state in response to a pyrotechnic activation (from charge, 5), in addition to a vibration or shaking movement.

Claim 46 is taught by Gawlick as well since the contact arrangement disclosed by Gawlick (e.g. contact, 20, in conjunction with contact cup, 22) moves in a lateral direction (the contact 20 must move laterally to make contact with cup, 22) while the battery unit moves in a longitudinal direction, thus the two directions of motion are essentially orthogonal.

Art Unit: 3641

Claim 47 is anticipated by the device of Gawlick since the battery unit (7) moves towards the ignition charge (which is below the battery in the figures) and is disclosed to be displaced through a distance of "several millimeters" (col. 2, line 11), which is "*about* 1 cm" (emphasis added) as claimed.

Claim 48 is anticipated by Gawlick in view of the insulating ring 12, which provides for the complete electrical insulation of the battery.

#### ***Allowable Subject Matter***

Claims 30 and 34-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 3,713,391 to Stout, Jr. et al.

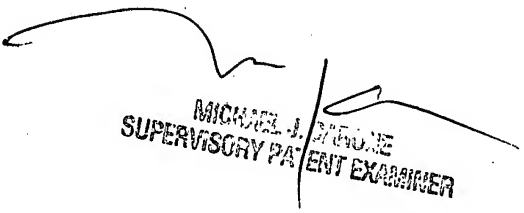
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabriel S. Sukman whose telephone number is (703) 308-8508. The examiner can normally be reached on M-F, 8:30-6:00, every other Friday off.

Art Unit: 3641

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone can be reached on (703) 306-4198. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-4180.

gss  
August 7, 2003



MICHAEL J. CARONE  
SUPERVISORY PATENT EXAMINER